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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,776	11/28/2001	Cyrille Fargier	G 98-1913 VB/LC	4317

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EXAMINER	
RONESI, VICKEY M	
ART UNIT	**PAPER NUMBER**
1714	

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/914,776	FARGIER ET AL.	
	Examiner	Art Unit	
	Vickey Ronesi	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 November 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-27 and 29-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-27 and 29-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 16-27 and 29-36 are now pending in the application.

2. The objection to the disclosure is maintained because (a) the correction in the table on page 11, the setting time should have been corrected to "40 mn," not "40 nm." All other objections to the disclosure have been withdrawn in light of applicant's amendment dated 11/15/2004 (pages 10-11).

3. The claim objections and the rejections under 35 U.S.C. § 101 and 35 U.S.C. § 112(2) have been withdrawn in light of applicant's amendment dated 11/15/2004 (pages 11-13).

4. The new grounds of rejection set forth below are necessitated by applicant's amendment filed on 11/15/2004. In particular, claims 29-36 are either new or amended claims which have introduced unexamined claim limitations. Thus, the following action is properly made final.

Claim Rejections - 35 USC § 112

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

5. Claims 35 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 35 and 36 recite the limitation "the anti-corrosion agent" in line 2 of each claim. There is insufficient antecedent basis for this limitation in the claims, however, there is antecedent basis for "the anti-corrosive agent."

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

6. Claims 16-19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Heimann et al (US 5,714,093) in view of evidence given by *Hawley's Chemical Dictionary.*

The rejection set forth in paragraph 6 of action dated 7/16/2004 is incorporated here by reference.

7. Claims 16, 19, 22, 23, 29, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Chang et al (US 4,963,698).

The rejection set forth in paragraph 7 of action dated 7/16/2004 is incorporated here by reference.

With respect to claim 30, Chang et al discloses a shaped article of a gel composition that is used to seal electrical cables wherein the preferred gels used contain crosslinked non-silicone polymers that are dispersed in a liquid from about 20% to about 95% by weight based on the weight of the liquid and polymer (col. 3, lines 58-65).

8. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Chang et al in view of evidence given by *Hawley's Chemical Dictionary.*

The rejection set forth in paragraph 8 of action dated 7/16/2004 is incorporated here by reference.

9. Claims 29, 31, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Chapin et al (US 4,849,579).

It is noted that the intended uses recited in claims 29 and 31, "for increasing the shock absorbing coefficient of cables" and "of protecting strands of a sheathed cable," respectively, have not been interpreted as claim limitations. Case law holds that "where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation." See *Rowe v. Dror*, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997).

Chapin et al a mineral oil-free cured cable splice encapsulant comprising polyurthane prepolymers (col. 5, line 60 to col. 6, line 17) and a hydrocarbon oil (col. 7, lines 30-64) wherein the composition is cured in situ in a cable at ambient temperature (col. 11, lines 13-15; abstract).

In light of the above, it is clear that chap et al anticipates the presently cited claims.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al in view of Becker et al (US 5,708,117).

The rejection set forth in paragraph 9 of action dated 7/16/2004 is incorporated here by reference.

11. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heimann et al in view of Zaid (US 5,936,059).

The rejection set forth in paragraph 10 of action dated 7/16/2004 is incorporated here by reference.

12. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heimann et al in view of Chang et al and Klein et al (US 5,567,748).

The rejection set forth in paragraph 11 of action dated 7/16/2004 is incorporated here by reference.

13. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heimann et al in view of Chang et al and further in view of Klein et al and Federici et al (EP 0 212 852).

The rejection set forth in paragraph 12 of action dated 7/16/2004 is incorporated here by reference.

14. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heimann et al in view of Chang et al and further in view of Federici et al.

The rejection set forth in paragraph 13 of action dated 7/16/2004 is incorporated here by reference.

15. Claim 27 is rejected as being unpatentable over 35 U.S.C. 103(a) as being unpatentable over Chang et al in view of Conger et al (US 4,059,709), Oshima et al (US 5,550,198), and Rinde et al (US 5,104,930).

The rejection set forth in paragraph 14 of action dated 7/16/2004 is incorporated here by reference.

16. Claim 28 is rejected as being unpatentable over 35 U.S.C. 103(a) as being unpatentable over Heimann et al et al in view of Rinde et al.

The rejection set forth in paragraph 15 of action dated 7/16/2004 is incorporated here by reference.

17. Claim 33 is rejected as being unpatentable over 35 U.S.C. 103(a) as being unpatentable over Chapin et al in view of Shimirak (US 4,466,843).

The discussion with respect to Chapin et al in paragraph 9 above is incorporated here by reference.

Chapin et al does not explicitly disclose the use of epoxy resins, however, it discloses that the compositions according to the invention are advantageously prepared on site by mixing of two separate previously prepared materials and are typically but not necessarily isocyanate-based (col. 5, lines 55-63).

Shirmirak relates, like Chapin et al, to protecting a slice in multi-wire electrical cables (col. 1, lines 8-10) and teaches that the curable liquid sealant used can be any curable liquid system such as either a two-part polyurethane or epoxy compositions (col. 3, lines 12-21).

In view of Shirmirak's recognition that polyurethane and epoxy curable liquids are equivalent and interchangeable, it would have been obvious to one of ordinary skill in the art to substitute epoxy with polyurethane and thereby arrive at the present invention. Case law holds that the mere substitution of an equivalent (something equal in value or meaning, as taught by analogous prior art) is not an act of invention; where equivalency is known to the prior art, the substitution of one equivalent for another is not patentable. See *In re Ruff* 118 USPQ 343 (CCPA 1958).

18. Claim 34-36 are rejected as being unpatentable over 35 U.S.C. 103(a) as being unpatentable over either Chapin et al in view of Zaid or Chapin et al in view of Shimirak and further in view of Zaid.

The discussions with respect to Chapin et al and chapel et al in view of Shirmirak set forth in paragraphs 9 and 17, respectively, are incorporated here by reference.

Chapin et al does not disclose the use of anti-corrosion agents *per se* but is open to the use of property-modifying additives such as antioxidants (col. 7, lines 8-9). In addition, given that the composition is utilized to protect the cables against water intrusion, it would have obvious to one of ordinary skill in the art to utilize an anti-corrosive agent to prevent corrosion of the metal substrates.

Zaid discloses an anti-corrosion system and teaches that well known corrosion inhibitors include phosphates (col. 1, lines 28-35). In addition, Zaid discloses an epoxy coating for a metallic surface that exhibits improved corrosion-resistance due to the addition of amines such as alkoxylated amines, including diamines, (col. 3, lines 37-53) and imidazolines as a curing agent (col. 1, line 11; lines 58-61).

Given that Chapin is open to the use of anti-corrosive agent and given the teachings by Zaid regarding known and beneficial anti-corrosive agents, it would have been obvious to one of ordinary skill in the art to utilize a known corrosive agent such as phosphate and to increase the pH levels in an epoxy composition with the addition of basic amines for the benefit of corrosion resistance, both as taught by Zaid.

Response to Arguments

19. Applicant's arguments filed September 23, 2004 have been fully considered but they are not persuasive. Specifically, applicant argues (A) that the essence of Heimann et al is the addition of a buffer which stands in contrast to the presently claimed invention; (B) that

Heimann et al fails to disclose or suggest a protective composition obtained by slow in situ polymerization, after injection at ambient temperature into a sheath surrounding the strands, of monomeric or polymeric reagents in the presence of a swelling solvent; (C) that Chang et al does not disclose or suggest injecting in liquid form at ambient temperature a protective composition of the claimed invention into a sheathed cable, and letting the composition polymerize slowly in situ to obtain a viscoelastic gel along the whole length of the cable; (D) that Becker et al fails to disclose or suggest a protective composition for strands of sheathed cables as set forth in the claimed invention; (E) that Zaid does not disclose or suggest injecting in liquid form at ambient temperature the protective composition of the invention into a sheath of a sheathed cable, or letting the composition to polymerize slowly in situ to obtain a viscoelastic gel along the whole length of the cable; (F) that Klein et al does not disclose or suggest a protective composition for the strands of cables as set forth in the claimed invention; (G) Federici et al does not disclose or suggest a protective composition for strands of sheathed cables for permanent structures or a method for protecting strands of sheathed cables comprising injecting a protective composition into the sheathed cable; (H) that none of Conger et al, Oshima et al, or Rinde et al discloses or suggests using a protective composition obtained by slow in situ polymerization, after injection at ambient temperature into a sheathed cable; and (I) that the Office has failed to meet its burden in showing that one of ordinary skill in the art would consider the claimed concentration of monomeric units as result-effective variables.

With respect to argument (A), the essence of Heimann et al is in the use of a buffer but that does not preclude the fact that Heimann et al discloses a thixotropic gel that reads on the present invention.

With respect to arguments (B) and (C), it has been noted (paragraph 6 of Office Action mailed 7/16/2004) that present claim 16 as written is in product-by-process format where the composition is modified by a process that does not necessarily add additional limitations to the composition. The method of obtaining the viscoelastic gel "by slow in situ polymerization, after injection at ambient temperature into the sheath surrounding the strands and in the presence of a swelling solvent" is a process limitation to which no patentable weight is to be given. In addition, no patentable weight is to be given to "polymerizable by free radical technique" in part a. Case law holds that "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production." See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) and MPEP § 2113. Therefore, the argument that neither Heimann et al nor Chang et al discloses in situ polymerization of a viscoelastic gel in a sheathed cable is irrelevant since both Heimann et al and Chang et al disclose an already polymerized composition that reads on the present composition claims.

With respect to arguments (D), (E), (F), (G), and (H), note that while the aforesaid references do not disclose all features of the presently claimed invention, the aforesaid references are used as teaching references, and therefore, it is not necessary for these secondary references to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather these references teach a certain concept, and in combination with the primary reference, disclose the presently claimed invention. If the secondary references contained all the features of

the present claimed invention, they would be identical to the present claimed invention, and there would be no need for secondary references.

With respect to argument (H), it is noted that the cited case law (*In re Antonie*, 559 F.2d 618, 620, 195 USPQ 6,8 (CCPA 1977)) is only relevant when the parameter optimized is not recognized in the art to be a result-effective variable. It is the examiner's position that the optimization of relative amounts of monomeric units in a polymerizable composition is well within the capabilities of one of ordinary skill in the art because the relative amounts of monomeric units determines significant parameters in a polymerization such as amount of unreacted monomer and the amount of available functional groups for crosslinking reactions.

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 21, 2005
vr

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